EDITORIAL NOTES.

Having invited criticism we must put up with it, but we dare not publish all the letters sent "friendly or otherwise." We print one as a sample of what perhaps is a well merited castigation, and we confess that our first number was not a success. Will our readers kindly pardon "the 'prentice hand," and bear with us until we are able to profit by the flood of advice which has broken upon the head of the luckless editor.

The Fellowship degree seems to be steadily rising in the estimation of the profession. On July 13th, at Red Lion Square, the examiners, Messrs. Cox, Fleming and Duguid tested the qualifications of no less than nine candidates, all of whom succeeded in obtaining the "higher degree." We hear that a very high standard of excellence was exhibited by the gentlemen who presented themselves, and that the papers and questions were of an unusually sound and practical nature. If members continue to avail themselves, in such numbers, of this only highway to the honorary and honourable positions of the profession, there will soon be no ground for the objection that our representatives and examiners are drawn from a too limited and exclusive section of the Body Corporate. The examination for the Fellowship has now passed beyond the stage when it was said to be merely a nominal test and the fact of a man passing is at any rate evidence that he has not ceased to be a student and that he has kept pace with the progress of science. There is abundant evidence that as much may be truly said of many members who have not presented themselves for the Fellowship. The existence of the "higher degree" should lead to no invidious comparisons. It was not intended to mark superiority; neither it nor any other examination can possibly test many characteristics which go to make a man. It was instituted "with a view to the advancement of veterinary science," and we believe that it is acheiving its object, not only by the spirit of rivalry it awakens in the younger men, but by the impetus giving to reading, research, and such other methods of acquiring and testing information as are necessary to enable a man to follow, if not to keep abreast of scientific progress.

Mr. Macqueen who gained a well-deserved reputation at the Glasgow Veterinary College as an anatomist and clinical teacher, and who on leaving that institution was selected by the council to be an examiner on botany, has again been moved on. This time he joins the teaching staff of the Royal Veterinary College. We can congratulate the College on its acquisition, and Mr. Macqueen on his appointment.

The most successful and interesting meeting ever held by the National Veterinary Association, took place on Tuesday and Wednesday last at Newcastle-on-Tyne. The weather certainly was depressing but members came in full force and with a courage and earnestness which was certain to carry success. The meeting opened on Tuesday with a welcome from the Mayor and Sheriff of the City, and each day's proceedings were fully reported by the local press. Leading articles appeared in most of the papers which fully recognised the value and authority of the veterinary profession, especially in reference to sanitary science.

To Mr. Geo. Elphick, who acted as local secretary, and who really made all arrangements for the meeting, a warm vote of thanks was given by the Association. We venture to think he even deserves the thanks of the profession, for never before has the profession been shown in a more favourable light, or its utility and power been demonstrated to the public more clearly and forcibly. The first day's proceedings terminated with the discussion on Mr. Robinson's paper.

In the evening the annual dinner was held at the County Hotel. The president, Professor Williams occupied the chair, and was supported on the right by the Sheriff (Mr. J. B. Ellis), Professor Philipson and Dr. H. E. Armstrong; on the left by Dr. Gibson, Dr. Fleming, Dr. Drummond, and Dr. Oliver. The vice-chairs were filled by Mr. H. Hunter, and Mr. George Elphick. An extremely long toast list was varied by some first-class singing, and matters were getting rather prolonged when the chairman with great determination announced his resolve to get through the toast-list or perish in the attempt.

The second days proceedings commenced with some official business. Professor Pritchard was elected president for the ensuing year, and the following gentlemen vice-presidents, Messrs. Kidd, A. Wheatley, F. W. Wragg, J. P. Walker, S. A. Lepper, and J. F. Simpson. The following were appointed on the council—Sir H. Simpson, Messrs. Elphick, Oliver, Robinson, Cunningham, and Simcocks. Mr. Wragg was re-elected as treasurer, and Mr. Banham as general secretary. It was also resolved that the next meeting of the association be held in London.

This was followed by a lively discussion on Mr. Fred Smith's paper, and in the afternoon Mr. Faulkener's paper on "Veterinary Education" received due consideration. The usual votes of thanks were then given to everybody, and never perhaps were they more heartily given or better deserved.

CLINICAL NOTES.

"Careful observation makes a skilful practitioner but his skill dies with him. By recording his observations he adds to the knowledge of his profession, and assists by his facts in building up the solid edifice of Pathological Science."

CEREBRAL TUMOUR.

By W. J. Mulvey, Esq., F.R.C.V.S.

On Wednesday morning, May 30th, I received an urgent message from one of my farrier's shops to come immediately, as a mare, the property of Messrs. O. & S. which been sent to the forge to be shod had suddenly gone mad, had broken out of the shop, and was now loose in the yard. I at once drove over, and found the mare standing up to her knees in a manure heap, alongside a wall, against which she was leaning her head, apparently in an unconscious state. She allowed me to approach her without movement, but the men warned me that if I attempted to move her she

would rush in any direction but the one she was wanted, and probably fall down; and so I found it, for on attempting to pull her round to the near side, she seemed almost immovable, but when by using force she was started, it was with the greatest difficulty she could be controlled. Away she went, at a fast walk, up against, through, or over everything that obstructed her. Then when she got to a wall, or anything to lean against on the off side, she would stand for a time perfectly quiescent, taking no notice whatever of anything going on around her. During these quiet intervals I was enabled to examine her, and found that there was very little disturbance either in pulse or respiration, she was perfectly blind, the eyes could be touched without movement. These quiet intervals would last for periods varying from a few minutes to half-an-hour, and then off she would start again, sometimes falling on her knees, but quickly up again, and resuming her unconscious march till she came against the wall again, when she would stand perfectly still. At these times, an ordinary observer would not have noticed anything particular to attract his attention. I made every enquiry, but there was really no history attached to the case, except that about two years previously she had a very slight attack of staggers, she had been constantly at work for the same firm for some years, up to the very morning that she was attacked. There had been, so far as I could gather, no premonitory symptoms, nothing to lead the horsekeeper to think that she was otherwise than in perfect health—had eaten her morning feed, before coming to be shod. After carefully examing the mare I could find no trace of injury to the head, (for the inference was, of course, that she had been hurt in my forge) and I came to the conclusion, and gave it as my opinion to the owners, that there had existed for some time a tumour on the brain, which by some means or other had either shifted its position, or had given way, and advised that the mare be destroyed. The firm left it entirely with me to do what I thought best in the matter, and I therefore had her killed in my yard. I particularly left word that the knackerman was to destroy her either by pithing or bleeding, but in my absence she was poleaxed. On opening the cranium I found that fortunately the axe had only pierced the left side of the brain, on removing the latter I placed it base upwards, and on carefully cutting into it a large ovoid tumour measuring $2\frac{1}{8}$ in one direction, by $3\frac{1}{8}$ in the other, and weighing $\frac{3}{4}$ of an ounce, was met with on the right ventricle, enveloped in membrane, and attached by a slight pedicle of the same. It was otherwise perfectly loose and detached, and glided easily out of its place. Both on the roof and floor of the ventricle was a depression corresponding to the tumour in shape, and there was a clot of fresh blood about the size of a threepenny-piece. Tumours of the brain are, as is well-known, occasionally met with, but it seems almost incredible, that a growth should attain the large size that this has done, without causing any perceptible inconvenience to the animal. It might also have been an awkward coincidence that the symptoms should have suddenly developed in my forge, if the owners had been strangers or have possessed more suspicion than confidence.

How these tumours, which must require some considerable time for their developement, should produce no signs of their existence until such violent and pronounced symptoms as were here exhibited are shown, is a pathological question, the obscurity of which I shall not attempt to elucidate.

AN INTERESTING CASE OF CHOREA IN THE HORSE.

By Charles Sheather, Esq., F.R.C.V.S.

On the evening of October 26th, 1887, I was urgently summoned to visit a case. On asking the messenger (a stableman) the nature of the illness, he replied, that "the horse 'Paddy' had got the jumps awful."

This was all the explanation I could obtain, so, struck with the apparent novelty of the case, I hastened to the stable, about a mile away. On arriving, a few enquiries gave me the following information:—

The horse had been recently purchased, came from Ireland, was high couraged, and had been driven leader in a team for two hours in the afternoon; on being fed he was noticed to be jerking in a peculiar way, and I was immediately summoned.

Observation gave the following facts, he was a whole colored bay nearly thoroughbred, 16 hands, and 6 years old off; he had been placed in a large loose box, well littered, and had in his manger some mixed oats and chaff, which he occasionally attacked as if hungry, but almost immediately moved away from again. He was highly excited, walking up and down the box attracted and excited by every little sound, occasionally snorting a little, constantly defœcating—nine or ten quantities of fœces lying about the box. His ears jerked, his facial muscles also exhibited the same phenomenon, the tail was elevated, and his hind-quarters were snatched first to one side then the other, while individual portions of the dorsal, lumbar, gluteal, triceps-abductor-femoris, bicepts-rotator-tibialis, and ischio tibialis muscles constantly underwent violent and spasmodic contraction, exhibiting abrupt and well-defined elevation at the point of contraction, and causing the most curious jerking movements of his frame, to be exhibited. There were no sudden contractions of muscle below the elbow or stifle, and the muscles of the abdomen were free from spasm.

Occasionally when the contractions were simultaneous on both sides of the spine, the back would become hollowed with a sudden jerk, while more often the whole of his hind-quarters would jerk to one side, then the other, while his tail was a martyr to the most irregular and fantastic movements. It was found impossible to keep clothing straight on him, it became immediately displaced. Pulse normal in number, but of precisely the type met with in acute laminitis; temperature normal, membranes slightly injected; breath and tongue sweet; fœces and urine normal.

A pharmacy existed on the premises, but its contents were not very varied; however, a good dose of a preparation of belladonna was administered in bolus,

and several other directions as to treatment were given.

Three hours after, the case was seen again. There was no improvement, the symptoms were almost the same, with the exception that instead of an animated excited air being apparent, the animal appeared more like a pugilist taking punishment but "game"; his gait being irregular, he wandered about in a somewhat aimless manner, his exhausted look was alternated by brilliance of eye, and alertness for a few moments. A bold dose of chloral was now administered, in the most suitable form, and in twenty minutes, the horse bore a dull subdued look without a vestige of irregular muscular action. A good dose of physic was administered, but every few days the symptoms returned, and were removed by chloral, and at length subdued by careful feeding, regular exercise and a steady administration of bromides (that of camphor proving the most effective) alternated with suitable tonics and anteperiodics.

Every effort was made to discover the exciting cause. Exploration of the rectum, mouth, and urethra yielded negative results; a thorough course of vermifuges, and strict suitable hygiene, produced no marked difference.

The symptoms were less marked in each succeeding attack after the first fortnight, and the greatest intervals occurred when diet and exercise were most regular. About three months however elapsed before "Paddy" was regarded as free from the recurrence of his peculiar symptoms.

AN OPERATION FOR ROARING.

I have been wondering for some time what the new and original operation to cure roaring might be. The first allusion to it was a paragraph in the Army Veterinary Report. This was noticed by the Metropolitan newspapers, and the Sporting journals. Then came a letter in the *Times*, from which we learned that two horses had been operated on, and that further experiments were to be made. Meantime the Army Veterinary Report circulated freely amongst newspaper men, and the owners of large studs of horses in London.

Mr. Fred Smith's article in this months *Veterinary Journal* now describes Dr. Fleming's operation as well as sundry other methods of procedure. The operation consists in removal of the left vocal cord. It is based upon a theory "that the sound is produced by the relaxed cord on the paralysed side"—a theory Mr. Smith expresses his dissent from, and one which we fail to find a single fact to support. If the operation be limited to the removal of the vocal cord, as stated by Mr. Smith, it is decidedly original, and we shall await with some interest the result of further experience. We are not likely to wait long for about half the metropolitan practitioners are trying to purchase bad roarers.

Laryngeal operations to cure (?) roaring are not new. Günther first suggested excision of the arytenoid cartilage, and in this country the operation was tried by Professor Gamgee in 1886-7. About the same time the late Mr. William Field also operated upon a number of horses. The good resulting from these operations was apparently not sufficient to bring them into general use. One of Professor Gamgee's operations is however worth describing, as in addition to removing a portion of the arytenoid cartilage, he divided the left vocal cord by a transverse incision. This animal was killed and dissected, five or six weeks after the operation, and a drawing of the larynx may now be seen in the Brown Institution.

The subject was a brown mare, so badly affected as to roar at a trot on the tan ride of the College. She was cast in the usual manner, placed on her back, and the head extended. In this position the space between the posterior edge of the larynx and the first ring of the trachea was easily found. A longitudinal incision about three inches long was then made, extending backwards in the median line from the cricoid cartilage. A little practical detail mentioned by Mr. Smith, was here neglected, with very annoying consequences. "On no account" says Mr. Smith, "open the larynx, until all hœmorrhage from the superficial incision has stopped; for blood flowing into the larynx is very obstructive to further work." Bold incision was in this case adopted, blood did enter the larynx, and the irritation set up caused frequent, violent expiratory efforts, which sent a forcible spray of blood into the operator's face. To give more room the first ring of the trachea was divided, and the wound held open by retractors. Looking downwards and forwards through the wound, the whole cavity of the larynx is in view. If the horse be healthy both arytenoid cartilages are seen acting rythmically with the respiratory movements. If paralysis of the crico-arytenoideus muscle exist, then the left arytenoid cartilage remains motionless, whilst the right rises and falls with each act of respiration.

Looking at the inside of the larynx in the living horse, seeing how little of its calibre is affected by the vocal cords, and how much obstruction is caused by a passive arytenoid cartilage, it is difficult to believe that the sounds of roaring can be due to any alteration of the vocal cord. Neither do I see why, if the cord be the cause, the sound should only be produced during inspiration, or why imminent suffocation should be induced by galloping some roarers. All this however, seems explainable if we adopt the hypothesis that the passive cartilage causes the sound.

To return to the case—the larynx being opened a long-handled hook was passed in, and the free border of the arytenoid transfixed. This caused instant and violent convulsive movement of the mare; on the cessation of which the cartilage was excised with a probe-pointed knife. In this case the vocal cord on the affected side was cut transversely across. No washing, dressing or sutures were used; the animal was simply released, allowed to rise, and taken to its loose box. No after treatment save cleansing the outer wound, was resorted to and no special case taken as to feeding. The wound healed in a few days, and we saw no symptom to even suggest that "food might pass into the air passages."

By adopting Mr. Smith's caution about the bleeding from the superficial incision, and employing

chloroform, the operation presents no difficulties to deter even the oldest practitioner. The mare was ridden on the tan ride at a canter about a fortnight after and no sound heard. It was then kept three or four weeks longer, being often cantered to test the effect of the operation. Finally the mare was killed and carefully dissected. Looking at the front portion of the larynx, what was most striking was the very slight alteration caused by the operation. Very little difference was manifested by the two arytenoids—the portion removed from the left cartilage being replaced by granulation to an extent nearly equal to the original mass. The vocal cord which had been cut across was atrophied to about half its normal bulk.

This case certainly showed greater improvement after the operation than two others in which the vocal cord was not cut, but it was a much worse case to begin with.

Fleming's operation may possibly lead to something useful, but we hardly think the experiments, so far as they are disclosed to the profession by "preliminary notes" from Woolwich and Aldershot, warrant the editorial in this month's Journal. "There is every reason to hope, judging from the experience already gained, that the cause of roaring may be removed," is a little sanguine. But the next sentence "and also that endo-laryngeal surgery in veterinary practice will be placed on a sound and safe basis," is a calm assumption that it was previously unsound and unsafe, and would suggest that some positive discovery had been made. There is absolutely nothing new, unless it can be shown that removal of the vocal cord is superior to removal of the arytenoid cartilage—which requires demonstration.

WILLIAM HUNTING, F.R.C.V.S.

VETERINARY MEDICAL SOCIETIES.

NATIONAL VETERINARY ASSOCIATION.

ANNUAL MEETING IN NEWCASTLE.

The sixth annual general meeting of the members of the National Veterinary Association was opened yesterday morning in the Assembly Rooms, Newcastle. The president of the association, Professor W. Williams, F.R.C.V.S., F.R.S.E., &c., occupied the chair, and there was a large and representative attendance. The Mayor (Mr. W. D. Stephens) and the Sheriff (Mr. J. Baxter Ellis) were present at the opening to welcome the members to Newcastle.

The CHAIRMAN asked those present to show their appreciation of the presence of the Mayor and Sheriff of Newcastle. (Loud applause.)

The MAYOR said he was exceedingly happy to have the opportunity of giving them a hearty welcome to Newcastle. He was glad, too, to notice the great advances which had been made in their science during the past few years, and they were now looked upon as a body who occupied a position which they did not a few years ago. He was also glad that they were in Newcastle, because he felt he was addressing a society for the prevention of cruelty to animals. The R.S.P.C.A. were much indebted to their association for all the information and benefit they derived from their advice. He looked upon their society as one calculated to do a great deal of good. Newcastle was a centre of a very large district, and the members of their association had many opportunities of exercising their knowledge in that district. He hoped the result of their conference would be a diffusion of that knowledge so essential to the right carrying on of their profession, that they would go away in that kind and genial friendship which showed they had learned something, and that they would communicate that knowledge to each other which they themselves had attained in their special departments. (Applause)

The SHERIFF said while the Mayor could claim in an indirect manner connection with their profession as president of the R.S.P.C.A., he could also claim in no less direct a way a connection with the same profession as belonging to the May Day Horse Procession Society. (Applause). They appreciated the usefulness of their association, as Newcastle was a city and a port for the importation of foreign cattle. When they considered that they brought from Denmark and Sweden and other places, independent of their own supply from Northumberland and neighbouring counties, from 1,500 to 2,500 cattle every week, it was necessary that they should have the best talent they could get from their profession to encourage the importation of only healthy animals, and to protect their own farmers—and that they might get as cheap food as possible, compatible with the protection of their own farmers. (Hear, hear.) As representatives of the city of Newcastle, they had great pleasure in welcoming them to the city. (Applause.)

THE ANNUAL REPORT.

The annual report was then submitted. It stated that the local secretary had taken advantage of his presence in Ireland this year of delivering a circular announcing the present annual meeting in order to increase the number of Irish members, and the result had been that 15 new members had been elected. Hitherto the association had been almost exclusively supported by English and Scotch practitioners, and, as a consequence, the gathering had been confined to England and Scotland. It was now suggested that the eighth general meeting should be held in Dublin, but to accomplish that it was necessary that the profession in Ireland should secure a strong representation on the association's list of membership. During the year 39 new members had been elected, so that the total number of members on July 2nd last was 295. The treasurer reported that the association was still in a prosperous condition. The year was commenced with a balance in hand of £13 2s 3d, and including this, the total income had amounted to £141 1s 3d.

Professor WALLEY, Principal of the Royal (Dick) Veterinary College, Edinburgh, moved the adoption of the report.

Mr. J. BELL, Carlisle, seconded the motion, which was carried.

THE PRESIDENT'S ADDRESS.

The PRESIDENT proceeded to deliver his inaugural address. In the first place he thanked them for the

high honour they had bestowed upon him by electing him their president, and in the names of himself and the Provisional Committee gave them a hearty welcome to Newcastle, a city rendered famous by its commercial, industrial, chemical, and last, but not least, its maritime enterprise, and illustrious by its association with the name of Armstrong, who had done so much to help them to defeat them enemies both by land and sea, and by the names of many of their own profession. In that address he (the president) would confine himself more to the social than the scientific aspect of the body corporate. He then made fitting reference to the death of Professor Robertson, principal of the Royal Veterinary College, and to the death of Mr. Harpley. Departing from these sorrowful reflections, he had to remind them that during the Jubilee of the Queen their profession was not forgotten. The principal Veterinary Surgeon to the Forces as well as the Chief Veterinary Inspector of the Privy Council obtained the Companionship of the Bath, and their president of the Royal College of Veterinary Surgeons and Mayor of Windsor was knighted. Few as these honours and recognitions were, they had done much to elevate the status of the profession. A matter which was acting prejudicially to the profession was that keen competition for practice which existed, especially in their larger cities. He was informed by many both in and out of the profession that the competition and consequent cutting down of fees was so very great as to render it an impossibility in some cases to have any margin of profit. This should not be; and a small amount of reflection would be amply sufficient to demonstrate its injurious effects. A word or two should be said about the press, which was a mighty organ for diffusing information in the shape of excellent articles written by able men, but he was sorry to say that there were other writers, some of whom were members of the profession, and some who were not, but who seemed to aim at becoming the veterinary advisers of all and sundry who could buy or borrow a penny paper. His remarks applied only to those who were members of the college, and he considered such men overstepped the line of professional propriety, probably inflicted serious damage upon those who were guided by them, and undoubtedly committed a serious offence against those members of the profession who, by its legitimate exercise, had to maintain themselves and families in a position of respectability. No one could deny that their profession had during the last few years made considerable progress both in its theory and practice, and, looking back, he could safely say that many dire and fatal diseases had, thanks to their better knowledge of the laws of health, almost entirely disappeared. Amongst them he might mention periodic ophthalmia, which used to be a very common disease, and that fertile source of pain and often of permanent lameness involving a fatal result, "quittor," which for one instance they had now, ten years ago they had a hundred at least. That satisfactory result was due to better shoeing, and to the fact that they, as veterinarians, had been able to convince farriers that paring and thinning of the horn was against the laws of physiology. Within the last year or so certain new operations had been performed for the relief of roaring, and also of lameness arising from disease of the lateral cartilages of the feet. He thought it would have been better had the Government instituted a further inquiry on the subject of pleuro-pneumonia, into the utility of preventive inoculation before determining on wholesale slaughter. Perhaps among store stock the wholesale slaughter is the most effective preventive to the spread of the disease, but his experience enabled him to state that inoculation prevented its spread, and as dairy cows were seldom or never sold from town dairies except to the butcher, inoculation would have been much more economical in the suppression of the disease. Regarding tuberculosis, it was admitted that it was closely allied to if not identical with consumption in man, and that it was transmissible from one animal to another, and from animals to man. Whilst admitting that he expressed the opinion that, before all so-called tubercular animals were condemned as unfit for human food, a better understanding should be arrived at as to what true tuberculosis is, for he thought that at least two other conditions, viz., caseous tumours, most generally found in lean animals, and tumours closely resembling the tubercular, but not presenting the same degenerative changes, often seen in fat animals, were liable to be confounded with true tuberculosis. He thought the presence of the tubercular bacillus should be the only criterion, and that in all cases where the bacillus is absent and the flesh otherwise good no objection should be raised to the use of the flesh as human food. (Applause.) Since their last meeting the Board of Examiners had been remodelled, and the student now had to pass his theoretical examination before he was allowed to present himself for the practical portion. (Applause).

"THE IMPORTANCE OF THE STUDY OF COMPARATIVE PATHOLOGY."

By Henry E. Armstrong, M.R.C.S. *Newcastle-on-Tyne, Medical Officer of Health for Newcastle, Lecturer on Public Health in the University of Durham, &c.*

Read before the Meeting of The National Veterinary Association.

In all the concerns of daily life the dependence of man on the lower creation for necessaries, comforts and luxuries is so obvious that to advocate the advantage of his inquiring into the circumstances attending such benefits would be absurd. To point out to him the importance of investigating the dangers to his health from the same source would be equally absurd were he as conscious of the evil as of the good he receives from that source. But as he seldom considers his liability to contract disease from animals and even plants, and certainly does not know the full extent of that liability, it is necessary to urge upon him in self-protection to look into these things. The study of disease-conditions of beast, bird, or vegetable, and their dependence on one another is, on the ground of pecuniary interest alone, well worth our while, for farmers, stockbreeders and

mankind in general inevitably profit by it. But it is still more advantageous when pursued in the cause of human hygiene. In health or in sickness, man is closely allied to all other living creatures. Like himself, they are, in these respects, under the influence of soil, local surroundings, weather, season, food, water, air, light, race, constitution, age, sex. Their diseases have a general resemblance to his own and are often transmissible to and from him. Hygienically and pathologically there is a close relationship between ourselves and different members of the animal and vegetable kingdoms.

If we examine more closely into this proposition we find abundant proof that man's health may be and is injuriously affected in a variety of ways by means of animals large or small, and the lower forms of plant life. The flesh he eats may give him Tapeworm, Trichiniasis, or Tubercle. Much of the butcher's meat intended or offered for sale in the public markets is from disease of one kind or another unfit for human food, and as such is seized and condemned. Much escapes detection, and doubtless still more is passed without question, owing to the want of precise knowledge as to what, and how far, morbid conditions affect its nutritive and dietetic value, and may with safety be disregarded. A list of diseases absolutely rendering the flesh of animals unfit for human food, drawn up by Dr. Vacher, Medical Officer of Health for Birkenhead—whose opportunities for observation are exceptional—includes Cattle Plague, Epizootic Pleuro-pneumonia, Sheep-pox. Cow-pox, Influenza, Acute Rheumatism, Black quarter (Anthrax), Swine-fever, Scarlatina, Quinsy, Cysticercus, and Trichina. This is a very circumscribed catalogue, omitting as it does Foot and Mouth disease) the flesh after which is known to cause illness in the consumer) and Tuberculosis, an affection characterized by the presence of bacilli in the tubercle-cells and blood of the affected animal, and hence implicating dangerously the whole of the flesh. In proof of the extent to which the last-named disease may go without altering the general appearance of the flesh, I may mention the following marked case which came under my own observation about eighteen months ago:—The parts submitted for inspection were the four quarters of a carcase of beef weighing 736lb., and the viscera belonging thereto. The meat had a fair proportion of fat and altogether looked well. The viscera were in a remarkably tuberculous state. The mediastina were largely occupied by tuberculous glands and abscesses. Most of the pulmonary tissue was pervaded by masses of tubercle softened to the consistence of thick oil paint and varying from the size of a hazel nut to that of an orange, and occupying altogether about three-fourths of the lung substance. The liver was greatly enlarged and contained many similar abscesses. The two largest mediastinal abscesses weighed respectively 6lbs. and 4lbs. The remainder of the mediastinal tuberculous substance weighed about 3lbs.

The lungs, freed of fat &c., weighed 26lbs.
The liver, „ „ „ 34lbs.

For comparison, the corresponding organs of a healthy animal similar in size, were weighed and found to be

Lungs - 9lbs.
Liver - 11lbs.

The fat and muscle of the carcase in question shewed no sign of disease, and, seen alone, would have sold as *good* in any market. Indeed it was intended for sale subject to our passing it.

How is such meat as that just described, which to the unaided eye appeared natural and healthy, to be detected on the stalls of a butcher market? What are its effects on the consumer? These and many other questions which occur in connexion with the subject of diseased meat are so many nuts for the comparative pathologist to crack.

Meat from healthy animals is liable, under certain conditions, to undergo changes of a fermentative character which render it poisonous. Instances are on record of serious outbreaks of illness after the consumption of sausages, tinned meat, ham, &c. so affected. Dr. Ballard, of the Local Government Board, reported on one at Welbeck a few years ago. Another occurred more recently at Carlisle. On what does this mysterious change from virtue to venom depend? Ask of Comparative Pathology.

Again, few animal substances are invested with greater pathological interest at the present time than that of Cow's milk. Cow's milk may in various ways cause disease in the consumer. If, for example, the yielder be tuberculous the consumer imbibes contagium for the bacilli of tubercle are found in the teats and milk of affected cows. The same with Foot and Mouth disease; here, however, the mischief is commonly much more readily traceable than in the foregoing.

The case of the "Hendon Cow disease" is still *sub judice*.

The *Lancet* of the 5th of May of the present year contains an account of a large outbreak of Scarlet Fever in a milk-walk in Glasgow, under the observation of Dr. J. B. Russell, Medical Officer of Health. In this instance the milk was traced to a farm at which there had been Scarlet Fever. One of the cows was "thin and mangy-looking" and had scabbed teats. A calf fed on the milk was "almost at once seized with a highly febrile illness which nearly killed it" but from which it recovered "with loss of hair and copious casting of the skin."

In 1879 several remarkably sudden and rapidly fatal cases of Scarlet Fever came under my notice, during a period of about six weeks, among the customers in a milk-walk in Newcastle. In all there were twenty-three cases of which ten were fatal in periods of from 15 hours' to 5 days' illness. Except the cases in question the district in which they occurred was almost entirely free from Scarlet Fever at the time. The most rapidly fatal case was that of a child who fell ill a few hours after drinking freely of the milk. In another family, three children fed with the milk took Scarlet Fever and one of them died. The fourth and only remaining child of the family, supplied for a special reason, with milk from a particular cow at a different dairy, escaped having fever. Several persons complained that the milk was offensive to smell and taste and kept badly.

In one instance I noticed that the unwashed milk tin had a foul smell. One of the cows at the dairy was found to be ill and was examined at my request by Mr. Clement Stephenson, Veterinary Surgeon, who gave it as his opinion that the animal was not suffering from any ailment by which the quality of the milk would be affected. At that date the question of Scarlet Fever direct from the cow had not been raised. All attempts to trace this outbreak of Scarlet Fever to infection of the milk, after it had left the Cow, failed. Notwithstanding this, the evidence connecting the outbreak with the Dairy was, to my mind, very strong; and to this day I believe that the milk was, in some mysterious way, the cause of the serious disease from which its consumers suffered.

At the beginning of the present year I had an experience, parallel in several respects to the foregoing, in the form of a small, distinctly localized outbreak of Scarlet Fever which occurred during a period of eleven days among the customers of a certain Dairy. Fortunately none of the cases were fatal. At this Dairy I found the hind quarters of one or two of the cattle slightly denuded of hair, which was explained as being due to the animals casting their coats and rubbing themselves. They were examined at my request by Mr. Clement Stephenson, F.R,C.V.S., who certified them to be in good health. There had been some suspicious cases of illness in the family of one of the milkmen about four months before the outbreak among the customers. Excluding these, as being probably too far distant in point of time to have been the source from which the milk customers received their infection, no information could be gathered as to any human disease by which the milk was likely to have been infected after its production. Nevertheless the facts of the outbreak pointing at this particular Dairy, were, as my report stated, too pronounced to be merely coincidental.

In other diseases important relations exist between the milk of cows and the spread of infection to man.

In other ways milk may be a source of danger to the consumer; for, when sour, its contained lactic acid in contact with a lead bowl will form a soluble irritant poison. Cows or goats also, eating poisonous plants or taking medicines, may yield poisonous milk.

Man may contract disease from mere contact with a diseased living animal—*e.g.* a glandered horse

The carcase of a cow or sheep, dead of anthrax, may give anthrax to the butcher who dresses it by inoculation through a scratch or cut on his skin; and the dry hair or wool may infect with the same deadly disease the manufacturer who sorts it.

The parasitic diseases of animals should have a most intense interest to all who eat meat, game, or fish. Yet not many persons are aware that animals are rarely without parasites. Few sea fishes are free from them; game is also infested by them. Van Beneden, the helminthologist, especially instances the turbot and woodcock as having their "intestines literally obstructed by tape-worms and their eggs." We all remember the "American Bacon scare" of a few years ago, and the effect it had on the sale of that important article of food. No trichina was, I believe, found in any American bacon sold in this country at that time. I am able to speak to its abscence in about six hundred specimens which I examined microscopically at the request of the provision merchants of Newcastle. But cases of trichiniasis do occasionally occur here. I have several specimens of the worm taken some years ago from the muscles of a subject in the dissecting-room of the Newcastle College of Medicine, and other cases have since been observed there, all of which had doubtless been caused by eating the parasite in ham or bacon.

Everyone is familiar with the term "Measles" of the pig, but everyone is not aware that measly pork or bacon is the cause of the common tape-worm (Tænia solium). Yet the disease is frequent. The authority already quoted (Gamgee) referring to Belfast, stated that measly bales of ham and bacon were regular articles of trade and largely exported to this country. One bacon factor on a very large scale at Waterford found an average of above 2 per cent. of his pigs measly. I have met with measly bacon or ham twice only in an experience of about fifteen years.

Diphtheria, which is so prevalent in some towns and frequently occurs sporadically in remote country houses, is known to affect quadrupeds and birds. Dr. H. F. Parsons notes numerous instances of the disease in man, in which swine, cats and fowls are also infected. Dr. Geo. Turner gives several similar cases in his experience as a Medical Officer of Health and otherwise. In one of these where the complaint attacked one family only in a village, no less than nineteen cats fell victims to the disorder!

Apart from the matter of the communicability of infection from animals to man, and but little less interesting to him, is the fact that to a large degree, their general diseases are also his. Looking through lists of the kind such as are given in the works of Prof. W. Williams and Dr. G. Fleming, this is the first feature to strike a medical reader. The next is that man seems exempt from certain ailments of animals—such as cattle plague, contagious pleuro-pneumonia, and perhaps strangles,—whilst he is affected with at least one disorder (syphilis) from which they are free, the contagium of that disease being "nowhere reproduced but within the human organism" (Ziegler). Then we notice that some diseases are limited to certain animals only—as distemper, rabies, footrot, &c. Again, some animals appear to possess more or less of special immunity from particular diseases—at least by inoculation—as dogs from tuberculosis, and perhaps monkeys from leprosy. Trouessart states that the inoculation of a monkey from a rabid dog caused attenuation of the resulting virus, whilst by passing similar virus through successive rabbits its strength was increased. The virulence of the contagium of swine-fever is also increased by passing through rabbits. On the other hand Pasteur attenuates the virus of rabies by inoculating "a morsel of the brain of a mad dog into a rabbit's brain, and passing the virus proceeding from the rabbit through the organism of a monkey, whence it becomes attenuated and a protective vaccine for dogs.

The subject of special immunity from, or liability to, particular contagia is so remarkable and so important, pathologically, that I do not apologise for quoting further examples of it, as given by Prof. Crookshank. The bacillus of septicæmia is fatal to house- (but not field-) mice. That of rabbit septicæmia is inert in dogs, cats and guinea pigs. Ordinary sheep are readily infected with anthrax, but Algerian sheep are only susceptible to large doses of the virus.

So far, we have considered chiefly our diseases in relation to those of domesticated animals. But the study of comparative pathology does not stop here. The part played by minute parasitic insects, worms, flies, and small animals in affecting man's health is great and frequently serious.

Moulds and fungi, also, form a prominent feature in the rôle of the comparative pathologist. Many of these are also the deadly foes of the agriculturist, the gardener, or the sportsman. Among those giving rise to human disease may be named the ergots of rye and maize, the parasitic fungi of tinea, ringworm, pityriasis, and other skin diseases, and of aphthæ (thrush). The salmon-disease (saprolegnia) is a fungus; so are the diseases of the potato and the vine. Dr. M. W. Taylor showed not long since the importance of studying moulds and fungi as the probable origin of diphtheria; and among numerous other observations of his own in support of this, cited an outbreak of the disease in connexion with the dietetic use of water fouled by fungi which had developed on the sides of the tank it was stored in. He gives also a remarkable case of no less than five outbreaks of diphtheria in the household of a farmer, of which four occurred in the three years 1879—81. In these the disease appears to have been directly due to the storage of wool, which became fusty and mouldy, in the room where the affected members of the family slept.

Ziegler describes actinomycosis, a disease of human beings, cattle and swine,—first recognised in 1877, as an inflammatory affection set up by the fungus actinomyces. Before its true nature and various forms were understood, the disease went by the names of osteo-sarcoma, bone-canker, woody tongue, lingual tuberculosis, &c.

The foregoing illustrations help to show how very extensive is man's pathological intimacy with animal and vegetable nature in general. Numerous though these examples are, they represent merely a portion of what is known on this vital subject in respect of which the sum of our knowledge is as nothing in comparison with our ignorance. An ocean of truth lies, still unexplored, before us. The microbe theory appears destined to overthrow many old ideas, and to enlighten much that has hitherto been in darkness. Formerly, parasitic worms and insects were thought to come spontaneously. Now we know that they are incubated and hatched from eggs as certainly as are chickens. Formerly fever was thought to arise *de novo*. Now we know that every case of fever is as surely bred from a pre-existing one as the calf is from the cow. So with a host of other ailments and disorders, many of which we perhaps do not even dream of, but which it is the busines of the comparative pathologist to investigate and elucidate. How great have been the benefits conferred on humanity by the few discoveries already made in this fruitful field! How much remains still to do?

Much impediment to scientific progress on comparative pathology seems to result from the present system of approaching the entire subject. Instead of pursuing, hand-in-hand, the search after truth for the good of all, physicians and veterinarians are too apt to work in different, and not always converging, lines,—sometimes apparently almost in antagonism, as though each party had a different interest to serve. Hence the want of full interchange of ideas and community of knowledge,—and as a result, apparent contradictions. Probably this condition of things is to a great degree due to the imperfect training students of each profession receive in this special department of their curriculum. Comparative pathology is not a thing in two halves, one of which belongs to doctors and the other to veterinarians. It is entire, and the common sphere of both. If the students of both kinds were taught this subject side by side they would lay hold of it with a fuller, firmer grasp; and having once felt the advantage of working together, would continue to so work in after life to the general benefit. At present medical students, in the multitude of their studies, pay too little attention to comparative pathology—often next to none at all; and in a veterinary curriculum, although the subject is inevitable, it is, I believe, taught and learnt, so to speak, only from an animal point of view, and not in any sense with the health of man as an ultimate aim. Hence, as qualified practitioners, doctors and veterinarians have no common interest on this ground, and the rich field for research lying ready to their united hand lies barren and untilled. Otherwise, what a rich harvest might they not reap from the joint cultivation of this promising soil! Inoculations, vaccinations, and attenuations of virus for the prevention of various diseases of man, beast, and bird: the comparison of epidemics and epizootics in regard of cause, time, place, and the features in which outbreaks among animals resemble or differ from those of man, such as *e.g.* why Hydrophobia affects more males (human and canine) than females; or why that disease is so prevalent in Lancashire, whilst Westmoreland is free from it and London comparatively so: the diseases affecting man and beast in the same, in different, or in parallel types, and the relations existing between one disease and another: the principles on which the immunity of man from, or his liability to, certain diseases of animals and *vice versâ*, depend: the "changes of host" and other conditions necessary for the full developement of parasites; the true position of meat and milk as diseased or infected products, their affect on the health of the consumer, and the classification of the former according to its fitness for human food: the precautious that should be taken on farms, in town cow-sheds, and elsewhere, to secure the health of dairy cows, and to protect their milk from infection during its production and distribution: the fitness for human food or otherwise of the milk of cows suffering from ailment of any kind, or during the period of œstrum:—these are but a few of the objects

the physician and veterinary surgeon should investigate together, and on which their time would be well spent. But such a desideratum will not be brought about until medical and veterinary students are trained together in the principles, aims and methods of scientific pathological research.

The want here so strongly expressed will not, it is hoped, so far as relates to the North of England at least, continue much longer. The Medical Faculty of the University of Durham are making preparation to meet it by the establishment of a Veterinary Department in their new College Building now in course of erection at Newcastle, where it is proposed to arrange for the reception of animals of different kinds, primarily for the purpose of studying their diseases in relation to those of man, in which object the science of Bacteriology will properly form a prominent feature.

It is unnecessary to enlarge further on the benefit to students of medical and veterinary science, to agriculturists and stockowners, and to the public generally, to be derived from a department such as this. One thing only is wanting to secure its establishment and success—namely money to meet the necessary expenses. Naturally the College look for help, and appeal to those on whose behalf they are working. The nucleus of a fund has already been formed, and the first contribution to it was a handsome donation of one hundred guineas by a respected Member of the National Veterinary Association, Mr. Clement Stephenson, of Newcastle-upon-Tyne.

EXTRACTS AND TRANSLATIONS.

THE CAUSATION OF VITAL MOVEMENT.

The Croonian Lecture for 1888 was delivered before the Royal Society by Dr. W. Kühne, Professor of Physiology in the University of Heidelberg, on the subject of "The Causation of Vital Movement." At the outset the Professor disclaimed the old idea that vital movement was a special animal function, whereas it is an attribute of all living matter. The unitary conception of life for which the age is distinguished rests in a higher degree on a knowledge of vital processes that is commonly recognised, and is just as much founded on physiological experience as on that of the forms of the organism. This is quite true of movement, the lecturer maintained. Movement is an attribute of protoplasm, both of animals and plants, and it is impossible to have a cell which does not preserve it at some time or other. This movement is a spontaneous activity which may go on in opposition to gravity, and which overcome frictional resistance. Its cause can only be internal, and only consist in chemical processes taken place within the protoplasm itself. But are these processes first set up by something coming from the outside, and determining the variability of the process? Physiological investigation has shown that protoplasm is irritable—that is it reacts to stimuli, just like muscle; and electrical stimulation especially, the most indispensible instrument of physiology, first strenghtens the movements, then brings the mass into a form with the least surface—*i.e.*, a sphere, in prolonged maximal contraction. We are compelled to regard all movement as either originating automatically or by direct external stimulus. The first idea of an observer, that something like will actuates even the lower protozoa, must be checked by our finding precisely the same phenomena in the colourless corpuscles of human blood, and the protoplasm of a plant-cell, and by contemplating the rhythmically contracting cells from the beating heart of a bird's egg after only a couple of days' incubation. Many causes of this motion are in recent times found to be non-essential; even oxygen can be dispensed with by many objects for lengthened periods. The lecturer detailed the delicate gradations between the most formless protoplasm, through flagella and cilia, and the primitive muscles of infusoria to the highest forms, showing that they possess a complete set of vitul powers, excepting that of reproduction; while fully developed muscle is actually poorer by one power than elementary protoplasm, for it is wanting in automatism; thus protoplasm as opposed to muscle possesses elementary nervous properties, The muscle-cell is incomplete without the nerve-cell connected with it by the continuous nerve-fibre, which may be several feet long. Thus we have two separate cells united only for one purpose; one is the exciting nerve, the other the obedient muscle. Without concerning himself about the excitation of the nerve-cell, the lecturer devoted himself to considering whether the muscle-cell can be stimulated otherwise than through the nerve. The affirmative answer disposes of the animistic or neuristic view that the excitation and regulation of the various functions is everywhere the work of the nervous system. The ubiquity of nerve-branches has been disproved by exhaustive researches, in which Professor Kühne has borne a part. He showed experimentally that small pieces of fresh frog's muscle in which no nerve can be detected by osmium-gold staining, which displays the finest nerve-fibres, yet twitched at each effective stimulus. He also demonstrated the incorrectness of the assertion that everything that excited the nerve made the muscle twitch, and *vice versâ*. A further series of experiments showed that motor nerves can conduct centripetally, that the absence of nerves from a portion of muscle can be absolutely proved by a physiological test, and that it is not possible to excite the motor nerve of a muscle-fibre by any stimulus to the nerve ends within the fibre. Moreover, the excitement or contraction of a muscle does not travel back into its nerves. Professor Kühne has proved the vastly preponderant number of muscle-fibres is entirely free from nerves, and that the nerve endings are confined to very small tracts, termed fields of innervation. Consequently it is proved that muscle-fibre shares with nerves the property of propagating its own excitation, the velocity of conduction being from one-third to one-tenth of what it is for nerves Thus the nerve only introduces a stimulus to the muscle, which propagates it by its own independent irritability in every movement and throughout life.

All the stimuli, except the gaseous, which can act on muscle appear capable of being resolved into the setting up of electrical currents, and thus, said the lecturer, we find ourselves in the presence of the possibility of reducing all irritability to a reaction to electrical processes, and of seeing vital electricity elevated into immeasurable importance. Going on to discuss the precise endings of nerves in muscles as essential in considering how nerve acts on muscle, Professor Kühne showed diagrams from microscopical preparations which he had on exhibition, indicating in many animals the superficial nature of nerve endings in muscles, the hooked forms of their branches, turned as a rule towards each other, and the direct contact of the nerve end with either the transversely striped contents of the fibres or with the protoplasmic sarcoglia which traverses and penetrates it. The muscle wave begins in the field of innervation, and has indeed been caught and fixed at the very beginning by sudden hardening of muscles. Professor Kühne then referred to the discoveries of Du Bois-Reymond in the following terms:—"The celebrated champion of electro-physiology has been able with the galvanometer to render the excitation of nerves, unattached to muscles or ganglion-cells, evident as the negative variation of the natural nerve current, to cause movement of a magnetic needle instead of a muscle, or to put the needle in the place of sensation." The currents of action of muscle, have long been proved to excite nerves, and there are similiar effects from nerve to nerve. Professor Kühne showed how he had succeeded in practically uniting two muscles, the nerves of which had been disposed of by poisoning with curare, so that the muscles acted as one. Stimulation and contraction were propagated from one end to the other. Any electrical insulation between the muscles stopped the current, consequently the first muscle must previously havs excited the second electrically. Here the lecture closed, without the learned Professor having claimed, as he might have done, that he had succeeded in proving to a large extent that muscle is ordinarily excited by actual electric currents, not merely by forces resembling them.—*Times.*

NOTES AND NEWS.

The Dual Office of Examiner and Councilman.

At the last Annual General Meeting of the profession, Mr. Dollar proposed, and Mr. Hurndall seconded a resolution—"That, in the opinion of the members of the profession here present, it is wrong in principle for a member of council to act as an examiner." The resolution was rejected, but the subject is one worthy of discussion.

The facts of the case are—1st, that the profession elect the council, which is the executive body. 2nd, that the council amongst its other duties elects the Board of Examiners. 3rd, that nearly all the veterinary examiners are members of the council, and consequently have a vote in the election of themselves and their confrères. Nobody seems to deny that the members of council are fit and proper representatives of the profession, or that the examiners are perfectly qualified for their special duties. Nothing in our charter forbids a man to hold the dual office, and no bye-law has ever been proposed bearing upon the subject. So long as the profession is governed by the council, it is right and fit that it should elect the examiners. If it be the opinion of the profession that the holding of a combination of offices is undesirable, effect can only be given to that opinion by electing to the council men prepared by their action and votes to oppose such an arrangement.

The objection to the dual office holding is, if we understand it aright, simply this—that there are in the profession only two posts of honor, to which men can aspire, viz., Examiner and Councilman, and that the dual arrangement unnecessarily and unfairly limits the possibilities of obtaining either. We say *unnecessarily* because it is held that there are plenty of men in the profession to fill every post by merely single appointments—and *unfairly* because a councilman must have little human nature in him if he does not vote for his friend, or his friend's friend, in preference to a stranger. The friend too can hardly refuse to give a vote for the man who has given, or promised as much to him. It is argued that this mutual good feeling, or mutual obligation tends to keep all the coveted appointments in too few hands, and to form a sort of close circle, admission to which is not to be obtained merely by fitness or merit.

On the other hand it is said that the existing arrangement practically works works well, and results in good men being appointed to the different offices. It is said that some of the dual holders are such wonderfully good men that their removal from either position would be a loss to the profession. It is further said that dual appointments are positively necessary, because the examiners are frequently required at the council table to assist and guide the members in carrying on the business of the profession. The reply to this of course is that a man who *has been* an examiner is just as capable to advise on some special point as a man who *is* one. Two questions bearing on the subject are—1st, would the existing examiners be content to continue their office if deprived of a seat on the council? 2nd, if the examiners were removed from the council could the profession find a sufficient number of other men to replace them, without injury to the best interests of the Body Corporate?

We are firm believers in representative Government; we know no other body except the council which could elect examiners, and it lies entirely with the electorate—*i.e.*, the members of the profession, to decide the question by selecting representatives who express their views.

Norfolk and Eastern Counties V.M.S.

A Meeting of the Norfolk and Eastern Counties Veterinary Medical Society, will be held at the Red Lion Hotel, Cambridge, on Tuesday, July 24th, at 2 p.m.

The President, Mr. John Hammond, will give his inaugural address, and also introduce for discussion,

"Some observations on the progress attained of late years in the Veterinary Art."

The Hon. Sec., Mr. R. S. Barcham, expects a good meeting, and some interesting pathological specimens to be exhibited.

To prevent a horse lying on one side.

In cases of capped-elbow and in some cases of slight injury to the angle of the hip, it is most desirable to prevent a horse lying on the affected side. It is equally desirable not to prevent him from resting and therefore we should not rack his head up. Our object is attained by tying him up with two halter-shanks, instead of one—one long one, and one short one. The horse then lies down on the side to which the short rope of the halter is attached. By this simple plan the horse is enabled to take his rest and yet unable to injure the sores by abrading or bruising them.

New Members.

A meeting of the Board of Examiners was held at the Royal College of Veterinary Surgeons on June 26 and 27. Thirteen gentlemen succeeded in satisfying the Examiners as to their "fitness to practice" and obtained the diploma.

New Fellows.

On July 13th, Messrs. Fleming, Cox and Duguid held an Examination at Red Lion Square, for the Fellowship. The following gentlemen were admitted Fellows:—J. H. Steel, C. H. Humphrey, I. Leather, R. J. Hickes, W. Peddie, J. B. Gresswell, F. P. Carter, S. H. Slocock, J. Cook.

Presence in Soil of the Bacillus of Typhoid Fever.

M. E. Macé *(Comptes Rendus)*, in seeking to ascertain the cause of an epidemic of typhoid fever, made a special bacteriological examination of the soil round a suspected well. In addition to the bacillus of typhoid fever he met with *Bacillus colicommunis*, *B. violaceus*, *B. mycoides*, and a large *Diplococcus*.

Tuberculous Rats.

Dr. Meunier mentions that in a certain infirmary where it was the custom to throw the remains of poultices which had been taken from tuberculous abscesses into a corner of the garden, this spot proved a source of great attraction to the rats, which are very fond of linseed. These animals becoming very numerous, the students and medical officers had a grand rat hunt one day, and succeeded in killing a large number. They were somewhat astonished to notice that most of the rats had immense necks. On examination it was discovered that this was due to tuberculosis of the glands. In addition to these glands other organs were in many cases found to be the seat of the disease, so that the rats had probably paid somewhat dearly for their indulgence in the luxury of eating cast-off poultices.

Big Price for a Stallion.

At St. Ives (Hunts) horse fair on Saturday, July 7, Mr. Thomas Benton, of Earith (Hunts), sold a three-year-old roadster stallion by Reality for £650 to Messrs. J. H. Truman and Sons, Bushwell, Illinois. This is believed to be the highest price ever paid for a stallion of this class.

Vegetarians and Cancer.

It has been stated by lecturers and others that vegetarians enjoy an absolute immunity from cancer. This statement—like many another statement of lecturers—is not borne out by facts. Surgeon Major Hendley, writing to the *British Medical Journal*, states that out of 102 major operations performed by him for cancer at the Mayo Hospital, Jeypore, since 1880, 41 were on the persons of meat-eaters, and 61 on those of strict vegetarians, who have never eaten meat from their birth. This fact is apparently incontrovertible.

A Plague of Mice.

Australia is suffering from a plague of mice. It is said that from Coomebarabran to Coolah there is hardly a residence that is nottroubled in this way. The mice come in droves, ande at everything in the place. On one station 2s. per 100 was offered for their destruction, and during asingle night 2,000 were killed. The price then went down to 1s. In one hotel in three nights 1,000 mice were killed with a mixture of flour and strychnine. At another place the mice ate the whole carcase of a freshly killed sheep in one night, leaving only the bare bones by the morning. At another station a man was kept whose sole duty was to keep the mice away from the provender during the time the horses were eating it, and this the man found a difficult task. The week before the races at Coolah, the vermin got into the horse-boxes at the station, and actually ate the bandages from the legs of the race-horses. Sleeping people are said to have been attacked by them. The crops were being destroyed. The mice climbed up the stalks, and ate the cobs. Many fields, acres in extent, had been abandoned, the corn being eaten completely away. People were at their wits' end to devise the best means for destroying the pest. The mice burrowed in the fields, like rabbits, in miniature warrens.

Dog Regulations in Paris.

A public meeting will shortly be held in Paris to protest against the stringent police measures regarding stray dogs. These regulations, which absolutely prohibit any dog to be in the streets unless led, were instituted chiefly upon the recommendation of M. Pasteur, against whom a certain portion of the French press are carrying on a most violent campaign. These papers affirm that M. Pasteur's system of treating hydrophobia is unsafe, and that it has not been tested for a sufficient length of time.

STUDENTS' COLUMN.

To the Editor of THE VETERINARY RECORD.

SIR,

I belong to a section of the veterinary profession quite unrepresented, in other words, I am a student. There are a great many of us in London, in Edinburgh and in Glasgow, and it has occurred to me that we might all benefit by an exchange of thought. At each school some books are used which perhaps might be useful, but are now quite unknown at others. Some wrinkles too may exist at one, which do not at others, as to methods of reading, arrangement of studies, and many more points which may be thought of.

We may have grievances which we would like to ventilate, and some of us might even contribute a paper not unworthy of publication. To come to the point at once, I beg to hope that your special corner may be taken advantage of.

I am Sir, yours faithfully,

SECOND YEAR.

A Prize of 5s. will be given for the best written answer to each of the following questions :—

Questions.

1. If a horse—(say 15·1 high employed by a country V.S., as a hack) be allowed 2-lbs. of beans daily, what other food stuffs and what quantities would he require?
2. What is the significance of a Cough? and under what conditions is it most commonly met with?

Last Week's Questions.

Both our questions were answered by a number of men and nearly all the answers were good. Mr. E. P. Edward, Nottingham, we consider best and have forwarded to him a P.O.O.

No competitor must have been more than two sessions at College. Answers must reach us not later than Wednesday morning. The competitions are open only to veterinary pupils and students. Each answer must be signed in full with name and address. If a pupil, state who with; if a student, state at what College. We trust to men's honor not to receive any help in preparing their answers.

CORRESPONDENCE.

Original articles and reports should be written on one side only of the paper, and authenticated by the names and addresses of the writers, not necessarily for publication.

We shall be obliged by early intelligence of all matters worth bringing under the notice of the profession, and thankful to any friends who may send us cuttings from local papers, containing facts of interest.

ANOTHER CANDID FRIEND.

"We earnestly invite criticism, friendly or otherwise, on our new venture." So you said in your notes Mr. Editor, and I will be equally frank with you. Bar the three "Clinical Notes" (a bad heading by the way) there was not another article worth reading. I expected something pithy, something smart, and certainly looked for short crisp notes on matters of interest. Where are they?

Your printing is only middling, your paper abominable, and the editorial work, I mean the correction of proof and arrangement of matter most negligent. You must try again and you must do better.

R. A. J.

London, July 16th, 1888.

NECESSITY FOR A WEEKLY ORGAN.

SIR,

The want of a weekly organ was very unpleasantly forced upon me at the end of last month. I received a letter from a client asking me if I would tell him what the new operation for roaring was, that he had seen mentioned in the London papers, and whether I could recommend it for his grey hunter that "made a noise." I was obliged to write and say I had not heard of it, unless he meant the operation of tracheotomy as performed by Mr. Jones. A few days after this I received the monthly periodicals and read Mr. Smith's paper. I felt rather annoyed that my client should know some weeks earlier than me the latest novelty in our own veterinary practice, and I thought that this might have been prevented, and possibly many other similar events, if we had had a weekly organ.

An M.R.C.V.S.

Chippenham.

Communications, letters, etc., have been received from Professors Axe, Dugnia, Mc Call, Pritchard, Williams and Walley; from Messrs. Cox, Brydon, Briggs, Mulvey, Edgar, Trigger, Hunter, Malcolm, Olver, F. Smith, Rogers, Stanley, Wheatley, Simpson, Sheather, Lupton, Humphrey, Cartledge Macqueen, Wilson, Benham, Sangster, Dudgeon, Stephenson, Kidd, Broad, Greaves, Taylor, Martin, Hopkin and Wragg.

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